REMARKS

Claims 1-11 are all the claims pending in the application. Claims 12-14 have been canceled without prejudice or disclaimer.

Additionally, Applicants respectfully reserve the right to file a divisional application directed to non-elected claim 14.

Entry of the above amendments is respectfully requested.

I. Response to Rejection of Claim 1 under 35 U.S.C. § 103(a)

Claim 1 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtschmidt et al. (US 2, 821,544).

Applicants respectfully traverse the rejection.

Claim 1 is directed to a method for producing a (meth)acrylate derivative having an isocyanate group, the method comprising performing dehydrochlorination of a 3-chloropropionate derivative having an isocyanate group, the derivative being represented by the formula (1), in the presence of a basic nitrogen compound having a tertiary nitrogen to prepare a (meth)acrylate derivative having an isocyanate group, the derivative being represented by the formula (2), wherein the tertiary nitrogen of the basic nitrogen compound has at least one group other than an aromatic ring group:

$$Cl\text{-}CH_2\text{-}CHR^1\text{-}COO\text{-}R^2\text{-}NCO \quad ...(1)$$

$$CH_2{=}CR^1\text{-}COO\text{-}R^2\text{-}NCO \quad ...(2)$$

wherein R^1 is a hydrogen atom or a methyl group, R^2 is an alkylene group of 1 to 10 carbon atoms that may be branched, or a hydrocarbon group in which a cycloalkylene group of 3 to 6 carbon atoms has alkylene groups of 0 to 3 carbon atoms at ends thereof. The (meth)acrylate derivative having an isocyanate group represented by formula (2) (hereinafter "isocyanate compound (2)") has a low content of residual hydrolyzable chlorine, and is obtained in a high

yield by dehydrochlorination of an isocyanate compound represented by formula (1) (hereinafter "isocyanate compound (1)"), in which chlorine is chemically bound, in the presence of a specific basic nitrogen compound having a tertiary nitrogen (*see* page 1, lines 14-17; page 3, lines 14-18; and page 7, lines 2-7 of the specification).

Holtschmidt discloses a technique that dehydrochlorinates β-chloropropionic ester isocyanate with relatively weak bases, for instance quinoline or dialkyl anilines, at temperatures of between 100 and 200°C (*see* column 2, lines 24-27).

Additionally, Holtschmidt discloses that strong tertiary bases are capable of exerting a polymerizing influence on the NCO group and therefore are not suitable according to its method (*see* column 2, lines 27-29). Accordingly, although Holtschmidt discloses a technique relating to dehydrochlorination, Holtschmidt disallows or teaches away from the use of tertiary bases. Therefore, Holtschmidt does not disclose, teach or suggest the specific basic nitrogen compound having a tertiary nitrogen used in the present invention.

Further, Holtschmidt is "Patent Document 1" described in the present specification. The present specification describes that vacuum distillation separation is difficult for the product obtained by the method of Holtschmidt and that the method of Holtschmidt cannot satisfy the industrial requirements (*see* page 2, lines 6-24 of the present specification).

On the other hand, the present invention solves the above problems by the technical features of the claimed invention (*see e.g.,* page 3, lines 15-18 of the present specification).

For at least the above reasons, it is respectfully submitted that Holtschmidt does not anticipate or render obvious the method of claim 1, and that claim 1 is patentable over Holtschmidt.

Moreover, claims 2-11 depend from claim 1, and thus it is respectfully submitted that these claims are patentable over claim 1 for at least the same reasons.

In view of the above, withdrawal of the rejection is respectfully requested.

II. Response to Rejection of Claims 1-13 under 35 U.S.C. § 103(a)

Claims 1-13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtschmidt et al. (US 2,821,544) in view of Misu et al. (US 6,245,935), further in view of Danielmeier et al. (US 6,222,066).

Applicants respectfully traverse the rejection.

Basically, the Examiner acknowledges that Holtschmidt does not disclose the use of triethylamines or ion-exchange resin for dechlorination. Thus, the Examiner relies on Misu and Danielmeier for these features, respectively. The Examiner takes the position that it would be obvious to use the triethylamines or ion-exchange resin of Misu and/or Danielmeier in the process of Holtschmidt.

Applicants respectfully disagree.

Misu discloses a method for reducing an amount of hydrolyzable chlorine contained in isocyanatoalkyl (meth)acrylate as impurities by treating the isocyanatoalkyl (meth)acrylate containing a hydrolyzable chlorine with an amine and/or an imidazole and an epoxy group-containing compound (*see* column 5, lines 4-25). That is, the technique disclosed in Misu is a purification technique for reducing free chlorine contained in isocyanate compounds, not a dehydrochlorination technique of an isocyanate compound in which chlorine is chemically bound, as the present invention.

Danielmeier discloses a purification technique for reducing chlorine compounds contained in isocyanate compounds using an anion-exchange resin having tertiary and/or quaternary amino groups.

As described above, Misu and Danielmeier disclose purification techniques for reducing chlorine compounds present as impurities in isocyanate compounds. On the other hand, the

present invention relates to a synthesis technique comprising removing chlorine from isocyanate compound (1), in which chlorine is chemically bound, by dehydrochlorination to yield a double bond.

Therefore, the techniques disclosed in Misu and Danielmeier are very different from the method of the present invention and of Holtschmidt in terms of reaction mechanism. Since the technical idea of Holtschmidt is very different from that of Misu and Danielmeier, there is no motivation to combine Holtschmidt with Misu and Danielmeier.

Even if Holtschmidt were somehow combined with Misu and Danielmeier, the claimed method would not be achieved because Holtschmidt teaches away from the use of the specific basic nitrogen compound having a tertiary nitrogen used in the present invention.

For at least the above reasons, Holtschmidt, Misu and Danielmeier fail to disclose, teach or suggest the method of claim 1, and it is respectfully submitted that claim 1 is patentable over the cited art.

Furthermore, claims 2-11 depend from claim 1, and thus it is respectfully submitted that these claims are patentable over claim 1 for at least the same reasons.

In view of the above, withdrawal of the rejection is respectfully requested.

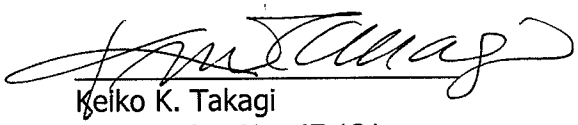
III. Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-11 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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